

$$10 \leq T1 \leq 50 \mu\text{m}$$

$$10 \leq T2 \leq 50 \mu\text{m}$$

$$0.2 \leq T1/T2 \leq 5.$$

3. (Amended) A method for producing a plasma display, according to claim 1 or 2, wherein ~~a~~ the space (S) between ~~the~~ ~~respectively~~ adjacent barrier ribs and the average diameter (D) of the outlet holes satisfy the following formula:

$$10 \mu\text{m} \leq D \leq S \leq 500 \mu\text{m}.$$

7. (Amended) A method for producing a plasma display, according to claim 1 or 2, wherein the paste applicator ~~used~~ has  $16n \pm 5$  (n is a natural number) outlet holes.

12. (Amended) A method for producing a plasma display, according to claim 1 or 2, wherein the phosphor pastes are applied while the distance between the top ~~ends~~ surfaces of the barrier ribs formed on a glass substrate and the tips of the outlet holes of the paste applicator is kept at 0.01 to 2 mm.

13. (Amended) A method for producing a plasma display, according to claim 1 or 2, wherein said phosphor pastes ~~respectively containing a phosphor material different in the color of the light emitted~~ capable of emitting different colors are discharged from one paste applicator, and the shortest distance between the outlet holes applying phosphor pastes mutually different in color is 600  $\mu\text{m}$  or more.

20. (Twice Amended) A method for producing a plasma display, according to Claim 1 or 2, wherein 50 wt% grain size of each of the phosphor powders ~~has a 50 wt% grain size of~~ is 0.5 to 10  $\mu\text{m}$  and wherein specific surface area of each of the phosphor powders is 0.1 to 2  $\text{m}^2/\text{g}$  ~~in specific surface area~~.

24. (Amended) A method for producing a plasma display in which three phosphor pastes ~~respectively containing each comprising~~ a phosphor powder emitting light of red, green or blue are applied to the spaces between ~~respectively~~ adjacent barrier ribs on a glass substrate, to form a phosphor plane, according to claim 2, wherein ~~the~~ phosphor paste

existing in the portions other than the outside predetermined coating positions are removed by ~~letting them adhere~~ adhering said phosphor paste to an adhesive material.

25. (Amended) A method for producing a plasma display, according to claim 1 or 2, wherein ~~the phosphor paste~~ deposited at top ~~ends~~ surfaces of the barrier ribs ~~are is~~ removed by ~~letting them adhere~~ adhering said phosphor paste to an adhesive material.

29. (Amended) A method for producing a plasma display, according to claim 28, wherein each of the photosensitive phosphor pastes have the following composition:

Organic component	: 15 ~ 60 parts by weight
Phosphor powder	: 40 ~ 85 parts by weight
Solvent	: 10 ~ 50 parts by weight.

30. (Amended) A method for producing a plasma display, according to claim 1 or 2, wherein the barrier ribs are provided as stripes with the following dimensions:

Pitch	: 100 ~ 250 $\mu\text{m}$
Width	: 15 ~ 40 $\mu\text{m}$
Height	: 60 ~ 170 $\mu\text{m}$ .

33. (Twice Amended) An apparatus for producing a plasma display, comprising a table for fixing a substrate with a plurality of barrier ribs formed on the surface, a paste applicator with a plurality of outlet holes to face the barrier ribs of the substrate wherein the average diameter (D) of the outlet holes of the paste applicator and the length (L) of each of the outlet holes satisfy the following relation:

$$L/D = 0.1 \sim 600;$$

a phosphor paste supply operatively connected to the paste applicator, and a moving actuator for three-dimensionally moving the table and the paste applicator relative to each other; and

a positioning controller operative and effective to adjust the angle of inclination of the paste applicator to top ~~ends~~ surfaces of the barrier ribs of the substrate, while keeping tips of the outlet holes of the paste applicator at a predetermined distance from the barrier

ribs of the substrate.

35. (Amended) An apparatus for producing a plasma display, according to claim 33, wherein the outlet holes of the paste applicator are not circularly formed, and the length (B) of each of the holes almost perpendicular to the barrier ribs and ~~the~~ a space (S) between the ~~respectively~~ adjacent barrier ribs satisfy the following relation:

$$10 \mu\text{m} \leq B \leq S \leq 500 \mu\text{m}.$$

44. (Amended) An apparatus for producing a plasma display, according to claim 33, wherein the centers of the outlet holes of the paste applicator are located above the spaces between the ~~respectively~~ adjacent barrier ribs.

49. (Twice Amended) An apparatus for producing a plasma display, according to claim 33, wherein a plurality of paste applicators are provided for ~~respectively~~ different phosphor pastes, and a plurality of phosphor paste supply devices are provided to supply the phosphor pastes for the respective paste applicators, so that spaces between the barrier ribs of the substrate may be simultaneously coated with the plurality of phosphor pastes.

51. (Twice Amended) An apparatus for producing a plasma display, according to claim 33, wherein a detecting means for detecting the positions of the outlet holes of the paste applicator, a detecting means for detecting the positions of the barrier ribs or the spaces between the barrier ribs of the substrate, a detecting means for detecting the position of top ~~ends~~ surfaces of the barrier ribs on the substrate, a detecting means for detecting the position of tips of the outlet holes of the paste applicator and a control means for controlling the start and end of applying of the phosphor paste in response to the relative position between the outlet holes of the paste applicator and the substrate are provided.

55. (Twice Amended) An apparatus for producing a plasma display, according to claim 33, wherein a reference mark detecting means for detecting a reference mark on the substrate, and a moving means and control means for ~~relatively~~ moving the paste applicator and the barrier ribs relative to each other so that the outlet holes of the paste applicator may

be located above spaces between the barrier ribs to be coated with the phosphor paste are provided.

58. (Twice Amended) An apparatus for producing a plasma display, comprising three coating devices provided in series to respond to three phosphor pastes ~~which are respectively~~ said coating devices each equipped with a table for fixing a substrate with barrier ribs, a paste applicator with a plurality of outlet holes to face the barrier ribs of the substrate, a supply means for supplying phosphor pastes to the paste applicator, and a moving means for three-dimensionally moving the table and the paste applicator relative to each other.

### Version with Markings to Show Changes Made to the Abstract

~~Since a widely applicable~~ A high quality plasma display equipped with a phosphor layer suitable as a highly precise plasma display ~~can be produced continuously at a high productivity level, an industrially advantageous method and apparatus for producing a plasma display can be provided. The highly precise plasma display obtained in the present invention~~ that can be widely used in the display field, for example, for wall mounted television sets, information displays, etc.

~~The;~~ a method for producing a plasma display ~~of the present invention comprises the step of including~~ continuously applying a phosphor paste containing a phosphor powder and an organic compound onto a substrate with a plurality of barrier ribs, from a paste applicator with a plurality of outlet holes. Furthermore, ~~the present invention comprises the steps of,~~ coating a substrate with a plurality of barrier ribs, with three phosphor pastes respectively ~~each~~ containing a phosphor powder emitting light of red, green or blue, as stripes in the spaces between the respectively adjacent barrier ribs on the substrate, from a paste applicator with outlet holes, and heating to form a phosphor layer.

~~Moreover, the ; and an~~ apparatus for producing a plasma display ~~of the present invention comprises including~~ a table for fixing a substrate with a plurality of barrier ribs, a paste applicator with a plurality of outlet holes to face the barrier ribs of the substrate, a supply means for supplying a phosphor paste to the paste applicator, and a moving means for three-dimensionally moving the table and the paste applicator relatively relative to each other.